Amendments to the Specification

Please replace paragraph 23 beginning at page 9, line 18, with the following rewritten paragraph:

[0023] The network 102 may comprise the Internet, an Intranet, a LAN, etc., or any other network system known in the art, including wireless and non-wireless networks. The administrator UI 104 comprises a system that submits requests for access to network resources. For instance, the administrator UI 104 may request a new allocation of storage resources to hosts 4, 6 (FIG. 1) in the SAN 2. The administrator UI 104 may be implemented as a program within the host 4, 6 involved in the new storage allocation or a within system remote to the host. The administrator UI 104 provides access to the configuration resources described herein to alter the configuration of storage resources to hosts. The element configuration policies 106 provide a management interface to provide configuration and control over a resource 112. In SAN implementations, the resource 112 may comprise any resource in the system that is configured during the process of allocating resources to a host. For instance, the configurable resources 112 may include host bus adaptors 20a, b, 22a, b, a host, switch or storage device volume manager which provides an assignment of logical volumes in the host, switch or storage device to physical storage space in storage devices 8,10, a backup program in the host 4, 6, a snapshot program in the host 4, 6 providing snapshot services (i.e., copying of pointers to logical volumes), switches 12a, b, storage devices 8, 10, etc. Multiple elements may be defined to provide different configuration qualities for a single resource. Each of the above components in the SAN would comprise a separate resource 112 in the system, where one or more element configuration policies 106 are provided for management and configuration of the resource.   The service configuration policy <u>108 is created by a configuration program, such as program 122, and</u> implements a particular service configuration requested by the host 104 by calling the element configuration policies 106 to configure the resources 112.

Please replace paragraph 28 beginning at page 12, line 22, with the following rewritten paragraph:

[0028]   Associated with each proxy object 118a..n, 119a...m, and 120 are service attributes or resource capabilities 128a...n, 129a...ɴm, and 130 that provide descriptive attributes of the proxy objects 118a..n, 119a...ɴm, and 120.   For instance, the administrator UI 104 may use the lookup service proxy object 116 to query the service attributes 130 of the service configuration policy 108 to determine the quality of service provided by the service configuration policy, e.g., the availability, transaction rate, and throughput RAID level, etc.   The service attributes 128a...n for the element configuration policies 106 may describe the type of configuration performed by the specific element.

Please replace paragraph 36 beginning at page 18, line 1, with the following rewritten paragraph:

[0036]   Each of the service configuration policies 202 and 204, element configuration policies 214a, b, c, 216a, b, c, 218a,b , c, and 220a, b, c, and resource APIs 222, 224, 226, and 228 would register their respective proxy objects with the lookup service 250. For instance, the service configuration policy proxy objects 238 include the proxy objects for the gold 202 and bronze ~~200~~ 204 quality service configuration polices; the element configuration proxy objects 240 include the proxy objects for each element configuration policy 214a, b, c, 216a, b, c, 218a, b, c, 220a, b, c configuring a resource 230, 232, 234, and 236; and the API proxy objects 242 include the proxy objects for each set of device APIs 222, 224, 226, and 228. As discussed each service configuration policy ~~200, 202~~ 202, 204 would call one element configuration policy for each of the resources 230, 232, 234, and 236 that need to be configured to implement the user requested configuration quality. Each device element configuration policy 214a, b, c, 216a, b, c, 218a, b, c, and 220a, b, c maintains configuration policy parameters (not shown) that provide a particular quality of configuration of the managed resource.   Moreover, additional device element configuration policies would be

provided for each additional device in the system. For instance, if there were two storage devices in the SAN system, such as a RAID box and a tape drive, there would be separate element configuration policies to manage each different storage device and separate proxy objects and accompanying APIs to allow access to each of the element configuration policies for the storage devices. Further, there would be one or more host bus adaptor (HBA) element configuration policies for each host system to allow configuration and management of all the host bus adaptors (HBAs) in a particular host 4, 6 (FIG. 1). Each proxy object would be associated with service attributes providing information on the resource being managed, such as the amount of available disk space, available paths in the switch, available host bus adaptors at the host, configuration quality, etc.

Please replace paragraph 57 beginning at page 26, line 9, with the following rewritten paragraph:

[0057] Upon receiving (at block 514) administrator selection of the Next button 408 (FIG. 7) with one host and service configuration policy 200, 202 selected, the configuration policy tool 270 then uses the lookup service proxy object 254 to query (at block 518) the service attributes 130 of the selected service configuration policy proxy object 120 (FIG. 2), 238 (FIG. 3) to determine all the host bus adaptors (HBA) available to the selected service configuration policy that are in the selected host and the available storage devices 230 attached to the available host bus adaptors (HBAs) in the selected host. As discussed, such information on the availability and connectedness or topology of the resources is included in the topology database 140 (FIG. 2), 256 (FIG. 3). The configuration policy tool 270 then queries (at block 522) the resource capabilities in the storage device configuration API proxy object 242 to determine the allocatable or available storage space in each of the available storage devices connected to the host subject to the configuration. The total available storage space across all the storage devices available to the selected host is determined (at block 524). The storage space allocated to the host according to the configuration policy may comprise a virtual storage space extending across multiple physical storage devices.

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The allocate storage panel 450 (FIG. 8) is then displayed (at bock 526) with the slider 452 having as a maximum amount the total storage space in all the available storage devices connected to the host and a minimum increment amount indicated in the ~~the~~ configuration policy 108, 202 or the configuration policy parameters for the storage device element configuration 214a, b, c (FIG. 3) for the selected configuration policy. Control then proceeds, via block 528, to block 550 in FIG. 10.

Please replace paragraph 71 beginning at page 32, line 28, with the following rewritten paragraph:

[0071]   In response to receiving (at block 906) selection of the finish button 820, in block 908, the configuration policy tool 270 determines all the service parameter settings in the GUI panel 800 (FIG. 13) for the throughput 804, availability 808, and latency 812, which may or may not have been user adjusted.   For each determined service parameter setting for throughput 804, availability 808, and latency, the element configuration attribute table 770 is processed (at block 910) to determine the appropriate resources and one element configuration 214a, b, c, 216a, b, c, 218a, b, c, and 220a, b, c (FIG. 3), for each configurable resource, e.g., storage device 230, switch 232, HBA 226, volume manager program 236, etc., that supports all the determined service parameter settings. Such a determination is made by finding one element for each resource having column values 774, 776, and 778 in the element configuration attribute table 770 (FIG. 12) that match the determined service parameter settings in the GUI 800 (FIG. 13).   If (at block 912) the administrator added a new service configuration policy by selecting the new button 803 (FIG. 13), then (at block 914) the configuration policy tool 270 would add a new service configuration policy proxy object 238 (FIG, 3) to the lookup service 250 that is defined to include the element configuration policies determined from the table 770.   Otherwise, if an already existing service configuration policy, e.g., 200 and 202 (FIG. 3), is being updated, then (at block 916) the proxy object for the modified service configuration policy is updated with the newly determined element configuration policies that satisfy the administrator selected service levels.

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